CLAIMS

1. A method for managing client-server communications, comprising:

providing a server with functions and interface methods;

providing a client with references to the interface methods; and

processing client requests by invoking the interface methods on the server via the references to the interface methods.

2. The method of claim 1, wherein providing a server with functions and interface methods comprises providing a table of pointers for the functions.

3. The method of claim 2, wherein providing a client with references to the interface methods comprises providing references to the table of pointers.

4. The method of claim 3, wherein processing client requests comprises generating requests from the client for functions from the server by referencing the table of pointers for the requested functions and generating responses from the server to provide the functions requested through the table of pointers.

5. A method for network device subsystem operations, the method, comprising:

implementing a first component in the network device, the first component having functions and function pointers corresponding to the functions;

implementing a second component in the network device, the second component having references to the function pointers in the first component;

generating a request from the first component for a function in the second component via the corresponding reference to the function pointer; and

generating a response from the second component to provide the requested function to the first component.

6. The method of claim 5, wherein implementing the first component comprises providing a table of function pointers.

7. The method of claim 6, wherein implementing the second component comprises providing references to the table of function pointers;

8. The method of claim 7, wherein generating a request from the first component comprises referencing the table of pointers for the requested function.

9. The method of claim 8, wherein generating a response from the second component comprises receiving the request from the first component and invoking the requested function via the table of pointers.

10. A method of interfacing communications in a network station for a data-over-cable network having a plurality of network stations, the method comprising:

providing a plurality of components in the network station, each of the plurality of components having a functionality set and a table of pointers for the functionality set;

providing a station manager having references to the tables of pointers in the plurality of components;

providing an interface manager for communication with the plurality of components and the station manager; and

processing station manager requests for functionality from the components through the interface manager via the references to the tables of pointers.

11. The method of claim 10, wherein processing station manager requests comprises:

generating requests at the station manager for functionality through the references to the tables of pointers and sending the requests for functionality to the interface manager; and

receiving the requests for functionality at the interface manager and invoking the functionality from the requested functionality sets via the table of pointers.

12. The method of claim 11, wherein the requests for functionality are processed serially by the interface manager.

13. The method of claim 11, wherein the requests for functionality are processed by the interface manager on a first-come first-served basis.

14. The method of claim 11, wherein providing the plurality of components includes storing data referenced by the pointers are stored in a shared memory area.

15. A network device, comprising:

a server component configured with a plurality of functions and function pointers for the plurality of functions;

a client component configured with references to the function pointers; and

an interface manager configured to receive requests for functions from the client component and to invoke the requested functions from the server component via the function pointers.

16. The device of claim 15, wherein the client component is configured to request functions through the references to function pointers.

17. The device of claim 16, wherein the interface manager is configured to receive the references to function pointers and to determine the requested functions to invoke through the references to the function pointers.

18. The device of claim 15, wherein the server component is configured to include a table of pointers to the functions.

19. The device of claim 18, wherein the client component is configured to reference the functions through the table of pointers.

20. A system for managing communications in a network station for a data-over-cable network having a plurality of network stations, the system comprising:

a plurality of components in the network station, each of the plurality of components having a functionality set and a table of pointers for the functionality set;

a station manager having references to the tables of pointers in the plurality of components; and

an interface manager for communication with the plurality of components and the station manager, the interface manager configured to process station manager requests for functionality from the components through the interface manager via the references to the tables of pointers.

21. The system of claim 20, wherein the station manager is configured to generate requests for functionality through the references to the tables of pointers and sending the requests for functionality to the interface manager; and the interface manager is configured to receive the requests for functionality and to invoke the functionality from the requested functionality sets via the table of pointers.

22. The system of claim 20, wherein the interface manager is configured to process requests for functionality serially.

23. The system of claim 20, wherein the interface manager is configured to process requests for functionality on a first-come first-served basis.

24. The system of claim 20, further comprising a shared memory area for storing all data referenced by the pointers.